

File



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

December 6, 1985

Mr. Robert A. Malone
Director, Environmental Affairs
Kennecott
10 East South Temple
P. O. Box 11248
Salt Lake City, Utah 84147

Dear Mr. Malone:

RE: Completeness Review of Kennecott UCD Concentrator
Modernization Project, Bingham Canyon Mine, ACT/035/002,
Salt Lake County, Utah

The Division has completed its review of Kennecott Minerals Company's October 16, 1985 application for a Mining and Reclamation Plan (MRP) permit revision for the UCD Concentrator Modernization Project. The Division has not performed an indepth review of the revised plans and updated material received December 3, 1985 from Alan Trbovich. The following review comments have been conducted on the preliminary plans received October 16, 1985. The latest revision will be scheduled for review and a response prepared in the near future.

The application has been found incomplete and the following technical deficiencies must be addressed before the permitting process can continue:

HYDROLOGY CONCERNS:

Title 40-8-12(b) - TJS

As many of the west side communities obtain significant portions of their water supplies from the ground water system, the applicant must describe the potential impact(s) to the hydrologic balance in the event of a system failure.

0005

The applicant describes two pipelines to be constructed:

1. 48 inch process water return line;
2. 48 inch slurry pipeline to concentrators.

The applicant must describe the methods and control to be used to monitor and handle the materials to be transported by pipeline. The discussion should present information on the slurry and the process water lines. The applicant must describe: (1) the characteristics of the materials carried in including the slurry and process water pipelines; (2) what potential impacts these materials would have on the surface and ground water environment in the event of a system failure; and (3) in the event of a leak occurring in either pipeline, what clean up measures would be undertaken?

The applicant must describe how stable the pipelines would be in the event of an earthquake typical for the seismic zone.

Rule M-3(1)(c) - DH

The applicant must provide technical documentation that leaching of copper sulfides from the proposed coarse ore pile to the subsurface as a result of rainfall/runoff events will not occur. If such documented proof is not available, the company may be required to submit plans for construction of a durable, impermeable pad with physical characteristics sufficient to impede the flow of sulfide leachate to the subsurface ground water system.

SOILS CONCERNS:

Rule M-3(1)(g) - JSL

The applicant must submit a minimum of a Class III (3) soil survey and map (scale 1" = 6000') of all potential disturbed sites. The soil survey should be used as a guide for topsoil and subsoil removal. The soil survey map must depict the locations of the topsoil stockpile areas, the short-term storage areas of fill material, and all the surface facilities. Each soil sample point should be identified.

Page 3
Mr. Robert A. Malone
ACT/035/002
December 6, 1985

Rule M-3(2)(c) - JSL

The applicant must provide a plan for the removal and protection of all long-term and short-term topsoil stockpiles and fill material stockpiles. The following items must be included:

1. a provision that all soil removal activities will be performed prior to any disturbance to the land surface;
2. the equipment to be employed in soil removal;
3. the soil survey and the results of the physical and chemical analysis should be used to develop a topsoil removal isopach map;
4. plans for the protection of all topsoil stockpiles from wind and water erosion (berms and diversions should be employed to route surface drainage around and away from the stockpiles);
5. the volume of each stockpile must be clearly indicated;
6. and, the approximate aerial extent, dimensions, slope and shape of a typical stockpile(s) must be provided.

Rule M-3(2)(d) - JSL

The application must include a detailed scenario of all grading and backfilling of the soil and fill material.

Rule M-10(11) -JSL

The application must include a plan discussing the measures for managing sediment control from disturbed areas during construction activities.

Rule M-10(14) - JSL

The applicant must perform a standard soil test to insure vegetation reclamation success. The following must be evaluated: total nitrogen; available phosphorus; potassium; calcium; magnesium; sodium; sodium absorption ratio; alkalinity; electrical conductivity; saturation percentage; soil texture; organic matter; and, pH. Based on the analytical soil data obtained by the above-mentioned factors, a soil fertilizer recommendation can be obtained.

Page 4
Mr. Robert A. Malone
ACT/035/002
December 6, 1985

A soil redistribution plan must also be implemented in the permit application. Such plan should include: the machinery to be used; the meteorological conditions during the period of redistribution; the minimum depth of topsoil redistribution; protective procedures to reduce potential compaction by the operation of equipment; and, soil scarification plans.

ENGINEERING CONCERNS:

Rule M-3(1)(g) - PGL

The applicant must show the location of the disposal area for overburden, waste, tailing, or any other rejected materials and water.

Rule M-3(2)(c) - PGL

The applicant must submit a plan for the manner in which overburden, topsoil, tailing, waste and reject materials will be deposited.

Rule M-10(2) - PGL

The applicant must submit information about the construction of berms, fences and/or barriers above highwalls in the pit for safety.

Rule M-10(2)(d) - PGL

The applicant must address where warning signs will be posted (to prohibit public access to the operations). Please indicate the size of the signs and what they will say.

Rule M-10(2)(b) - PGL

The applicant must submit a plan which discusses the disposal of trash and debris as well as the disposition of foundations and buildings and conveyors, pipelines, etc., associated with this proposal.

RECLAMATION CONCERNS:

Rule M-3(2)(a)(b) - PGL and LK

The applicant must submit a plan for the reclamation of the land affected.

Page 5
Mr. Robert A. Malone
ACT/035/002
December 6, 1985

The applicant must submit a statement of known prior and current uses to which the land was put, including estimates of current resources and its capabilities to support a variety of uses or potential uses.

Final reclamation should be tied to the expected postmining land use (or current use). If the expected land use changes prior to reclamation, then the reclamation plan may be changed to be consistent with the new land use.

The applicant must include information about the possible uses for the land following termination of mining.

Rule M-3(2)(e)(f) - LK, PGL

Revegetation plans are required for:

1. contemporaneous reclamation/stabilization of all cuts, fills, embankments, topsoil stockpiles, etc., and
2. final reclamation of all disturbed areas. These plans must identify the acres to be reseeded, species to be used, rates of seeds and/or seedlings to be planted, mulching and irrigation techniques (if any), fertilizer, and a timetable for completion of each major step in reclamation. The timetable does not need to identify dates work will begin and end, but should identify month or season of year and the expected time to complete the task.

Rule M-10(1) - PGL

The applicant must submit a plan for approval of the postmining land use.

Rule M-10(4) and (5) - PGL

The reclamation plan for the waste piles and fills must be submitted. Profiles of the postmining configurations of the waste piles and fill must be submitted. The postmining pit highwall configuration must also be included.

Page 6
Mr. Robert A. Malone
ACT/035/002
December 6, 1985

Rule M-10(7) - PGL and JSL

The applicant must submit information for the reclamation of all roads and pads. These roads must be indicated on the permit area map.

The application must include plans for the reclamation or stabilization of onsite roads.

Rule M-10(12)(2) - LK

The applicant needs to provide documentation on how vegetation cover was estimated (page 28), including a description of sampling methodology, sample size, arithmetic mean and standard deviation.

WILDLIFE CONCERNS:

Rule M-3(1)(d) - LK

The applicant should provide a map indicating where road crossings will be provided over the pipeline. This same map should also identify those areas where the pipeline will be buried thus providing wildlife crossing opportunities.

BONDING CONCERNS:

Rule M-3(1)(a) - PGL

The applicant must submit a map designating the boundaries of the disturbance of the land involved (i.e., a permit area map) with the total number of acres involved.

Rule M-3(1)(b) - PGL

The applicant must, within the interior limits of the land affected, show existing active or inactive, underground or surface mined areas. The boundaries of the surface properties must be shown and the names of surface and mineral owners.

Page 7
Mr. Robert A. Malone
ACT/035/002
December 4, 1985

Rule M-5 - PGL

The applicant must submit a detailed cost estimate for the reclamation of the land affected. This estimate represents the cost for the Division to do the approved reclamation work. References for the reclamation cost estimate are the Rental Rate Bluebook and the Means Site Cost Index.

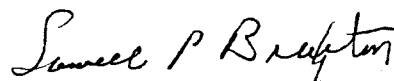
Rule M-10(9) - PGL

The applicant must submit information about the removal of all structures, rail lines, utility connections, equipment and debris. The cost of the removal must be included in the reclamation cost estimate.

Please provide a response to the deficiencies outlined above at your earliest convenience. The Division will require at least 30 days to complete a review of Kennecott's response to these remaining concerns. In recognition of the company's proposed time schedules for obtaining all approvals for this proposal, time is of the essence.

Thank you for your cooperation in finalizing this permitting activity. Should questions arise, please contact me or D. Wayne Hedberg of the permitting staff.

Sincerely,



Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

DWH/btb

cc: Ken Alkema
Bob Morgan
Alan Trbovich
Ken May
Pam Grubaugh-Littig

Dave Hooper
Jim Leatherwood
Lynn Kunzler
Tom Suchoski
Dave Wham

8992R-84-90